

### **PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Applicants request review of the rejection in the above-identified application. This request is being filed with a Notice of Appeal. Claims 1-2, 5-7, 9-24, and 39-49 are pending herein and include claims that have been at least twice rejected. Review is requested in light of a selection of deficiencies, which are discussed in detail below.

Applicants respectfully submit that a *prima facie* case of obviousness has clearly not been established for claims 1-2, 5, 7-17, 19-24, and 40. In particular, the Whiting-O'Keefe, Pollack, Andre, and Zaleski references, either alone or in combination, fail to teach or suggest all the claim limitations for each of these claims as hereinafter set forth.

Referring initially to independent claim 1, Whiting-O'Keefe was cited as disclosing "calculating, with a computer processor,...the particular patient," while Pollack was cited as disclosing "a work score for...using the satisfied work factors." Applicants respectfully submit that Whiting-O'Keefe and Pollack, either alone or in combination, fail to disclose "calculating, with a computer processor, a work score for the particular patient using the satisfied work factors," as recited in claim 1. Neither reference discloses a *work score calculation* for a *particular patient* using *satisfied work factors*, as discussed in detail below.

The calculation of regression coefficients in Whiting-O'Keefe, does not teach or suggest a work score calculation for "the particular patient," as in claim 1. The work factors of claim 1 relate to the *particular patient population to which the patient belongs*, while Whiting-O'Keefe estimates "charges" for "episodes of care" that are *not patient-specific*. *Id.* at col. 7, ll. 53-54. Satisfied work factors for one patient are different from the satisfied work factors for another patient even though the patients, in some instances, may be in the same patient population. For example, a patient in the intensive care unit (ICU) is associated with a catalog of particular work factors related to treating ICU patients. *See Specification* at ¶ [0049]. Patient

data is compared to the work factors to assign weights to the satisfied factors. *Id.* at ¶¶ [0054]-[0056]. A work score is then generated for a particular patient based on the weights assigned to the satisfied work factors for the particular patient. *Id.* at ¶ [0057]. Because weights are assigned to the satisfied work factors, a work score calculated for a particular patient according to claim 1 does not correlate to the generic charges estimates of the Whiting-O'Keefe reference for a patient population. In other words, weighted work factors based on a particular patient's data do not equate to estimated charges for a service for a patient population that is not patient-specific. As such, Applicants respectfully submit that the Examiner's finding is clearly erroneous.

Whiting-O'Keefe was also cited as determining a type of patient population that the particular patient is a member of. Applicants respectfully submit that Whiting-O'Keefe fails to teach or suggest such a determination, as Whiting-O'Keefe references "healthcare encounter records for a large population of patients," to "calculate the regression coefficients." *Whiting-O'Keefe* at Col. 8; Fig. 3. This calculation of regression coefficients is not patient-specific. In fact, Whiting-O'Keefe admits that its system does not consider the data of a particular patient in question because it evaluates the charges to treat a specific patient or group of patients "who will usually *not* be included in the population from which the encounter records are taken." *Id.* at Col. 8, ll. 21-24 (emphasis added).

Applicants respectfully submit that Pollack fails to disclose "accessing work factors for the type of patient population," and "work score factors," as cited in the outstanding Office Action. Additionally, Applicants maintain that Pollack fails to teach or suggest the limitations of "comparing the data for the particular patient to the work factors to determine which factors are satisfied," "accessing a weighted value for each satisfied work factor" and "assigning each satisfied work factor with a weighted score." The approach of calculating a

work score in claim 1 is significantly different than determining bed availability in Pollack (and estimating charges for patient care in Whiting-O'Keefe.) Pollack determines the expected length of stay of a patient, and the probability of death of patients. *See Pollack* at Figs. 5-6. This is in contrast to claim 1, which is directed to determining a work score for a particular patient by comparing patient data to work factors to determine which work factors are satisfied, accessing weighted values for each satisfied work factor, and assigning each satisfied work factor with a weighted score. Pollack does not teach or suggest calculating a work score for a particular patient *using satisfied work factors*. Pollack quantifies the severity of a patient's condition as it relates to the *length of patient stay and patient bed availability*, while the work score of claim 1 indicates a quantity of personnel hours anticipated to serve the particular patient. *Id.* at Col. 3, ll. 27-46. Patient stays and bed availability, although pertaining to patients, does not teach or suggest the calculation of a work score for a particular patient that is based on satisfied work factors. As such, Applicants respectfully submit that the Examiner's finding is clearly erroneous.

Applicants respectfully submit that Andre and Zaleski fail to cure the deficiencies of Whiting-O'Keefe and Pollack noted above and the claims are allowable on that point alone. Applicants further note that Andre fails to teach or suggest the limitation of "wherein the work score indicates a quantity of personnel hours anticipated to serve the particular patient." By contrast, Andre discloses a score generated and assigned by a schedule evaluator based on employee schedule changes. *See Andre* at Col. 5, ll. 35-39. The schedule generated by addition or removal of a patient depends upon the work performed by the changed employee. *Id.* at ll. 49-58. As such, the amount of work performed by an employee added or removed from a schedule in Andre, is distinct from a work score based on the quantity of personnel hours anticipated to serve a particular patient in claim 1. For example, multiple personnel may be expected to contribute various numbers of hours to treatment of a particular patient. Those varying numbers

of hours may satisfy work factors for that patient, and in turn be used to calculate the work score that “indicates a quantity of personnel hours anticipated to serve the particular patient.” Because calculating a work score in claim 1 is based on *satisfying work factors* for a particular patient, it involves more than simply quantifying a change in total work performed by a schedule change of one employee to another, as in Andre. As such, Applicants respectfully submit that the Examiner’s finding is clearly erroneous.

Independent claim 12 recites features similar to those discussed above for claim 1 and is patentable over the art of record for at least the same reasons. Additionally, the Office Action cites Pollack as disclosing “calculating staffing needs for the patient population based on the work scores obtained for the one or more patients in the patient population.” As previously noted, Pollack does not teach or suggest the calculating of a work score, as Pollack is merely focused on bed availability and length of patient stay. Although Pollack “allocat[es] hospital beds to patients...based on said number of hospital beds in use,” this type of availability-based scheduling is distinct from using a *work score* (that reflects personnel hours to serve a patient in a patient population) to calculate staffing needs. See *Pollack* at Col. 20, ll. 39-40.

Independent claim 39 recites features similar to some of the features discussed above for claim 1 and is patentable over the art of record for at least the same reasons. Additionally, Applicants maintain that Andre fails to teach or suggest “wherein the first instance of a work score includes a measure of personnel hours anticipated for the particular patient at a first point in time.” Andre generates a score associated with a change in employee schedule, such as a change from one employee to a second employee. For example, Andre compares the amount of work performed by a first employee with the amount of work performed by a second employee, to evaluate a schedule change from the first to the second employee. There is no reference in Andre to a *work score* that is calculated using the measure of *personnel hours*

*anticipated for a particular patient* at a first point in time. By contrast, the work score of claim 39 is calculated based on weighted values assigned to satisfied work factors, where the work factors are specific to a particular patient population.

Additionally, the number of personnel hours in Andre does not directly correlate to a specific, numeric work score, as in claim 39. Instead, there may be several different healthcare providers whose varying personnel hours may contribute to satisfying one or more work factors for a patient in a particular population. For example, work performed by four nurses and three doctors for a single patient in a particular patient population may all contribute to the overall calculation of a work score for that particular patient. As such, Applicants respectfully submit that the Examiner's finding is clearly erroneous.

Independent claim 41 recites features similar to some of the features discussed above for claim 1 and is patentable over the art of record for at least the same reasons. Claims 2, 5-7, 9-11, 13-24, 40, and 42-49 depend from independent claims 1, 12, 39, and 41 and are patentable over the art of record at least for the reasons stated above for claims 1, 12, 39, and 41. For at least the reasons stated above, claims 1-2, 5-7, 9-24, and 39-49 are believed to be in condition for allowance. Applicants respectfully request withdrawal of the pending rejections and allowance of claims 1-2, 5-7, 9-24, and 39-4. The Commissioner is hereby authorized to charge any amount required to Deposit Account No. 19-2112.

Respectfully submitted,

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Docket Number (Optional)

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VIA EFS November 30, 2010

Signature\_\_\_\_\_

Typed or printed  
name \_\_\_\_\_

Application Number

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10/06/2003

First Named Inventor

DOUGLAS W. WAGER

Art Unit

3686

Examiner

RAJIV J. RAJ

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

**Note: No more than five (5) pages may be provided.**

I am the

☐ applicant/inventor.

/Alison L. Erickson/

Signature \_\_\_\_\_

☐ assignee of record of the entire interest.

See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)

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November 30, 2010

Date \_\_\_\_\_

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.

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